

Docket No. 500.43031X00  
Serial No. 10/642,632  
Office Action dated April 7, 2006

## **REMARKS**

### **I. Introduction**

By the present Amendment, claims 1, 4, 6, and 12-14 have been amended, and claim 3 canceled. Accordingly, claims 1, 2, and 4-18 remain pending in the application. Claims 1, 14, 17, and 18 are independent.

### **II. Office Action Summary**

In the Office Action of April 7, 2006, the Drawings were objected to because of various informalities. The Disclosure was also objected to because of various informalities. Claims 1, 8-10, 14, 17, and 18 were rejected under 35 USC §102(e) as being anticipated by U.S. Patent No. 6,926,988 issued to Dristy, et al. ("Dristy"). Claims 2 and 11 were rejected under 35 USC §103(a) as being unpatentable over Dristy in view of U.S. Patent No. 5,686,200 issued to Barton, et al. ("Barton"). Claims 5 and 15 were rejected under 35 USC §103(a) as being unpatentable over Dristy in view of U.S. Patent No. 6,428,921 issued to Grot. Claim 16 was rejected under 35 USC §103(a) as being unpatentable over Dristy in view of U.S. Patent No. 4,317,863 issued to Strasser. These rejections are respectfully traversed.

The Examiner's indication that claims 3, 4, 6, 7, 12, and 13 would be allowable if rewritten in independent form to include all the limitations of the base claims and any intervening claims, is noted with appreciation.

### **III. Drawings**

The Drawings were objected to because Fig. 2 appeared to lack one of the reference numerals discussed in the Specification.

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Concurrently submitted herewith is a Replacement Sheet containing Fig. 2 which includes reference numeral 7. Withdrawal of this objection is therefore respectfully requested.

#### **IV. Disclosure**

The Detailed Description was objected to because of various informalities. Specifically, the Office Action indicates that the Detailed Description does not mention Fig. 7. The Office Action further indicates that reference numerals 9, 11, and 13 were not found in the Specification.

Applicants note that the Specification makes reference to Fig. 7 at page 15, line 1 and line 9. Additionally, reference numeral 11 is mentioned at page 15, lines 9-11 of the Specification.

By the present Amendment, Applicants have amended the Specification to include a description of reference numerals 9 and 13. No new matter has been added.

Withdrawal of this objection is therefore respectfully requested.

#### **V. Rejections under 35 USC §102**

Claims 1, 8-10, 14, 17, and 18 were rejected under 35 USC §102(e) as being anticipated by Dristy. Regarding this rejection, the Office Action indicates that Dristy discloses a fuel cell for generating electricity, which comprises two electrodes on either side of a membrane in order to generate an electric field from the reaction of hydrogen and oxygen. Dristy is also indicated as disclosing two contact members that each contact a surface of an electrode, and a pressing member for urging the membrane, the electrodes, and the contact members toward each other. The contact members are isolated from each other, and indicated as being conductive

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and capable of forming an electric circuit with the electrodes of the fuel cell.

Regarding claim 14, the Office Action further alleges that the pressing member (64) has a surface in contact with a contact member (60), which would be the head surface in claim 14. Applicants respectfully disagree.

Claim 14 has been rewritten in independent form to incorporate the subject matter of original claim 1. As amended, independent claim 14 defines a fuel cell for generating electric energy with a chemical reaction between hydrogen and oxygen.

The fuel cell comprises:

- a membrane electrode assembly for generating an electric field through the membrane electrode assembly with the chemical reaction between the oxygen and the hydrogen;

- a pair of first and second contact members, the first contact member contacting a first side surface of the membrane electrode assembly, and the second contact member contacting a second side surface of the membrane electrode assembly; and

- a pressing member for generating a pressing force for urging each of the first and second contact members toward corresponding one of the first and second side surfaces in a pressing direction;

- wherein the pressing member has a head surface area extending in the transverse direction and contacting one of the first and second contact members to urge the one of the first and second contact member toward the corresponding one of the first and second side surfaces in the pressing direction, and the first and second contact member are prevented from contacting each other within the head surface area as seen in the pressing direction.

According to independent claim 14, the fuel cell includes a membrane electrode assembly for generating the electric field through the membrane as a result of the chemical reaction between oxygen and hydrogen. A pair of first and second contact members is provided for contacting a first side surface and second side surface of the membrane electrode, respectively. A pressing member is provided for generating a pressing force to urge the first and second contact members toward the

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corresponding side surfaces along a pressing direction. The pressing member has a head surface area that extends in a transverse direction and contacts either the first or second contact member to urge it toward the corresponding second side surface (either the first or second) in the pressing direction. Additionally, the first and second contact members are prevented from contacting each other within the head surface area when viewed in the pressing direction.

The Office Action alleges that Dristy discloses all the features recited in the claimed invention. However, the Office Action does not provide any indication as to where, or how, Dristy discloses certain features recited in independent claim 14, such as the first and second contact members being prevented from contacting each other within the head surface area when viewed in the pressing direction. Dristy appears to be completely silent on this feature. This silence cannot be construed as disclosing a feature recited in the claim.

It is therefore respectfully submitted that independent claim 14 is allowable over the art of record.

Independent claim 17 defines a fuel cell that comprises:

- an anode side member including an anode collector portion,
- a cathode side member including a cathode collector portion,
- and

- a membrane electrode assembly including an anode for oxidizing a fuel, a cathode for deoxidizing an oxygen and an electrolyte between the anode and cathode, and clamped between the anode side member and cathode side member,

- wherein the anode side member and cathode side member are connected to each other through supporting portions at an radially outer side of an outer periphery of the membrane electrode assembly, and are urged toward each other between the membrane electrode assembly and each of the supporting portions.

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At least one feature of independent claim 17 is the manner in which the anode side member and cathode side member are connected to each other through supporting portions on the outer periphery of the membrane electrode assembly and urged toward each other between the membrane electrode assembly and each of the supporting portions. Dristy does not appear to disclose all of the features recited in independent claim 17. It is therefore respectfully submitted that independent claim 17 is allowable over the art of record.

Independent claim 18 defines a fuel cell that comprises:

- an electrode for one of oxidizing a fuel and deoxidizing an oxygen,
- a side member including a collector portion and contacting the electrode,
- a casing, and
- clamping members,

wherein the side member is urged by the clamping members toward the casing to be pressed against the electrode between the side member and the casing.

According to independent claim 18, the fuel cell includes an electrode for oxidizing fuel and deoxidizing oxygen, and a side member that includes a collector portion and makes contact with the electrode. The fuel cell also includes a casing and clamping members. The side member is urged by the clamping members toward the casing to be pressed against the electrode between the side member and the casing.

The Office Action alleges that Dristy discloses all of the features recited in independent claim 18. However, Dristy does not appear to disclose clamping members as recited in the claimed invention. Dristy provides a pair of frame members that can be used to retain the flow field support member (56) within a flow

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field (54). See column 4, lines 38-50. Dristy does not appear to provide a clamping member as set forth in independent claim 18.

It is therefore respectfully submitted that independent claim 18 is allowable over the art of record.

#### **VI. Allowable Subject Matter**

Independent claim 1 has been amended to incorporate the subject matter previously recited in claim 3. Claim 3 was indicated as being allowable in the Office Action. Accordingly, independent claim 1 is now believed to be allowable over the art of record.

Claims 2, 4-13, 15, and 16 depend, either directly or indirectly, from independent claim 1, and are therefore believed allowable for at least the reasons set forth above with respect to independent claim 1. In addition, these claims each introduce novel elements that independently render them patentable over the art of record.

#### **VII. Conclusion**

For the reasons stated above, it is respectfully submitted that all of the pending claims are now in condition for allowance. Therefore, the issuance of a Notice of Allowance is believed in order, and courteously solicited.

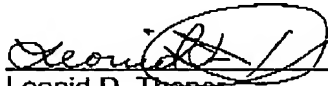
If the Examiner believes that there are any matters which can be resolved by way of either a personal or telephone interview, the Examiner is invited to contact Applicants' undersigned attorney at the number indicated below.

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**AUTHORIZATION**

Applicants request any shortage or excess in fees in connection with the filing of this paper, including extension of time fees, and for which no other form of payment is offered, be charged or credited to Deposit Account No. 01-2135 (Case: 500.43031X00).

Respectfully submitted,  
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**Attached: Replacement Drawing Sheet**